

REMARKS

Applicants note that the current Office Action was sent to the former counsel by mistake. In accordance with the "Revocation and Power of Attorney with Statement Under 27 C.F.R. 3.73(b) and Change of Correspondence Address" faxed to the Examiner on 11 December 2003, Applicants respectfully request that the USPTO update its records and forward future correspondence to the address associated with Customer Number 24112. A copy of the Revocation and Power of Attorney is attached for your convenience.

The Examiner rejected claims 1 – 3, 8, 11 – 17, 20 – 23, and 27 – 29 under 35 U.S.C. §102(e) as anticipated by U.S. Patent Application No. 2001/0053972 to Amada et al., herein referred to as Amada. In order to anticipate under §102, every element or limitation of a claim must identically appear in a single prior art reference. *In re Bond*, 910 F.2d 831, 323 (Fed. Cir. 1990). Further, anticipation requires that the single prior art reference disclose every element of the claimed invention arranged in the same manner as claimed. *Lindemann Maschinenfabrik v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458 (Fed. Cir. 1984). As discussed further below, Amada does not teach each and every element of the independent claims arranged in the same manner as claimed.

The present invention is directed to a system that filters a received signal, samples the filtered signal, and calculates an estimate of an impulse response of the filter based on the filtered signal and an expected signal. Specifically, claim 1 requires a pulse-shaping filter, a sampler coupled to receive the filtered signal, and a pulse-shape estimator coupled to the sampler. The Examiner asserts that Figure 6 and various

paragraphs in Amada teach each of these elements. However, while the encoding system of Figure 6 does include a pulse-shaping filter (162), there is nothing in Figure 6 or in the supporting text to teach or suggest “a sampler coupled to receive the filtered signal ..” or “a pulse-shaping estimator coupled to the sampler ...,” as required by claim 1. As a result, Amada cannot anticipate claim 1.

In rejecting claim 1, the Examiner asserts that paragraph 0077 of Amada teaches the sampler and pulse-shaping estimator elements of the claimed invention. However, paragraph 0077 simply teaches a digital implementation of a pulse-shaping filter that filters a pitch vector to extract samples from a particular synchronized point of the pitch vector. The Examiner appears to believe that because the pulse-shaping filter 162 of Amada outputs samples, then pulse-shaping filter 162 encompasses both the pulse-shaping filter and sampler of claim 1. However, claim 1 specifically requires a sampler “coupled to receive the filtered signal, sample the received signal, and output a sampled version of the received signal.” Because Amada does not teach or suggest a sampler coupled to the pulse-shaping filter to receive the filtered signal, Amada cannot anticipate claim 1.

Further, Amada does not teach a pulse-shape estimator, as required by claim 1. When addressing this aspect of the claim, the Examiner again points to paragraph 0077, which states, “by calculating the impulse response together with that of the synthesis section 120 in advance, therefore, the calculation amount can be reduced.” First, it is important to note that Amada only discusses calculating an impulse response together with that of the synthesis section. As such, Amada does not teach calculating an impulse response of the pulse-shaping filter. Further, Amada teaches “calculating

the impulse response ... in advance.” Because the calculation is performed in advance, the calculated impulse response of Amada cannot be interpreted as being based on a sampled version of the received signal and on an expected plurality of training symbols, as required by claim 1.

In summary, there is nothing in Amada to teach or suggest the sampler or the pulse-shape estimator of claim 1. Therefore, for at least the reasons discussed above, Amada cannot anticipate claim 1.

The Examiner rejected independent claim 11 for the same reasons applied to claim 1. However, like claim 1, claim 11 includes the limitation of “estimating an impulse response of the pulse-shaping filter based on the filtered signal and on an expected signal.” Because Amada does not teach estimating an impulse response of the pulse-shaping filter, much less an impulse response based on the filtered signal and on an expected signal, Amada cannot anticipate claim 11.

Further, the Examiner rejected independent claim 20 for substantially the same reasons used to reject claim 1. However, claim 20 includes a sampler and a pulse-shape estimator that calculates “an estimated impulse response of the pulse-shaping filter based on the sampled version of the received signal, an expected version of the plurality of training symbols, and on medium response coefficients that define characteristics of the medium between the mobile terminal and a transmitting station. First, as discussed above relative to claim 1, Amada does not teach a sampler coupled to receive the filtered signal or a pulse-shape estimator that calculates an estimate of the impulse response of the pulse-shaping filter. As such, Amada cannot anticipate claim 20 for at least these reasons. Further, Applicants note that the Examiner

completely ignores the fact that the calculated impulse response of claim 20 also depends on medium response coefficients. As such, the rejection is improper and must be withdrawn. Lastly, there is nothing in Amada to teach or suggest calculating the impulse response based on the medium response coefficients. Based on any of the above reasons, Applicants submit that claim 20 is patentably distinct from Amada.

Lastly, the Examiner rejected claim 28 for the same reasons used to reject claim 20. However, claim 28 includes the limitation of “a sampler coupled to receive the filtered signal” and “a pulse-shape estimator coupled to the sampler....” Because Amada does not teach the sampler or the pulse-shape estimator, as discussed above, Amada cannot anticipate claim 28.

Further, claim 28 also requires “a component coupled to the output of the pulse-shape estimator, the component receiving the estimated impulse response of the pulse-shaping filter from the pulse-shape estimator and using the estimated impulse response to improve the reception of the received signal.” However, the Examiner’s rejection completely ignores this limitation. As such, the rejection is improper and must be withdrawn. Because there is nothing in Amada to teach or suggest a component coupled to the pulse-shape estimator that uses the estimated impulse response to improve reception of the received signal, Amada does not anticipate claim 28.

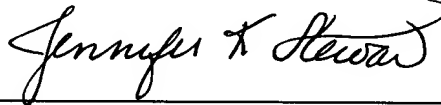
In light of the arguments presented above, Applicants submit that independent claims 1, 11, 20, and 28 are patentably distinct from the cited art. Further, because independent claims 1, 11, 20, and 28 are patentably distinct, dependent claims 2 – 10, 12 – 19, 21 – 27, and 29 – 32 are also patentably distinct. Applicants respectfully request reconsideration.

Regarding the §103 rejections cited against claims 18, 25, and 26, Applicants note that these rejections are rendered moot by the above arguments.

In light of the above arguments, claims 1 – 32 stand in condition for allowance. As such, Applicants request reconsideration and allowance of the claims. If any issues remain unresolved, Applicant urges the Examiner to call the undersigned to expediently resolve any such issues.

Respectfully submitted,

COATS & BENNETT, P.L.L.C.



---

Jennifer K. Stewart  
Registration No.: 53,639

Dated: October 8, 2004

P.O. Box 5  
Raleigh, NC 27602  
Telephone: (919) 854-1844